

TECHNICAL CARD

ELEMENTS 3E EKO+

Elements designed for the erection of single-layer structural walls.

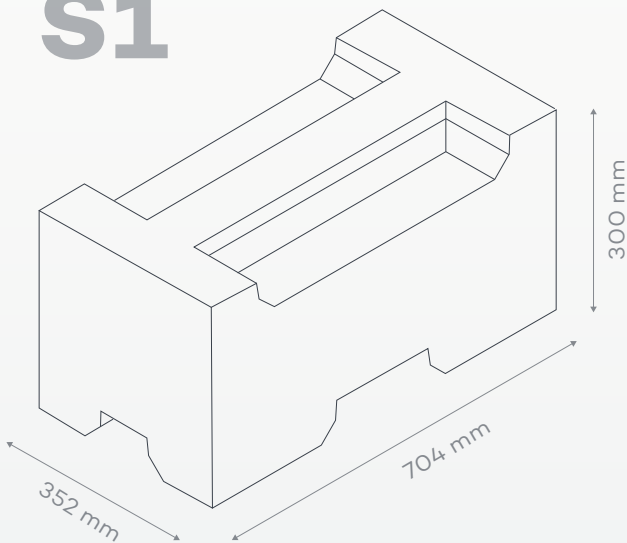


**ECO-FRIENDLY
CONSTRUCTION**

**THE SYSTEM COMPRISES 37 TYPES OF ELEMENTS
GROUPED ACCORDING TO THEIR PURPOSE.**

DIMENSIONS OF THE
BASIC ELEMENT

S1

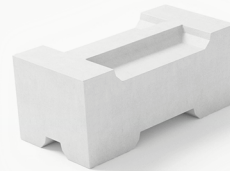


Deviations:
Flatness of the laying surface: $\leq 1,0$ mm
Parallelism of the laying surface: $\leq 1,0$ mm
Mass of a single piece: 32 kg/el.

D4

DoP S3E EKO+/-/02/21

**6 BASIC
ELEMENTS**



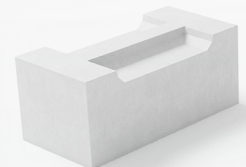
**BASIC
ELEMENT S1**
purpose: infill



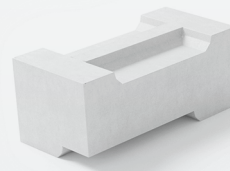
**HALF
ELEMENT S $\frac{1}{2}$**
purpose: infill



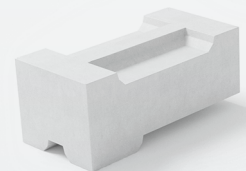
**ENDING
ELEMENT SZ/EO**
purpose: top structure end



**STARTING
ELEMENT SO**
purpose: foundation slab surface



**LEFT
CORNER ELEMENT SNL**
purpose: corner laying



**LEFT
CORNER ELEMENT SNP**
purpose: corner laying

SYSTEM 3E EKO+ is currently the warmest material for building:

- ✓ energy-saving,
- ✓ zero-energy,
- ✓ plus-energy,
- ✓ passive houses.



WITHOUT
INSULATION



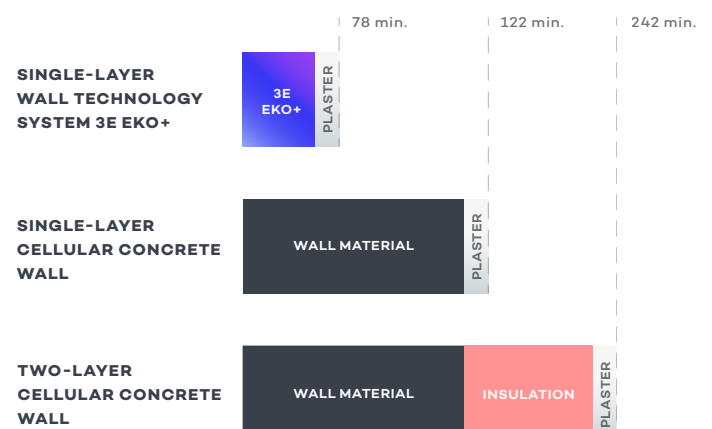
BONDING WITHOUT
MORTAR AND GLUE



CONSTRUCTION
OF 1 M² OF WALL
IN 4.5 MINUTES

U=0,198 W/m²K

Building time comparison of a 1 m² wall



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**ECO-FRIENDLY
CONSTRUCTION**

PERFORMANCE CHARACTERISTICS

Density	310 ± 10% kg/m ³
Characteristic compressive strength	≥ 1,5 N/mm ²
Water absorption due to capillary rise	after 10': ≤ 40 g/m ² · s ^{0,5}
Dimensional stability. Moisture expansion	≤ 0,30 mm/m
Reaction to fire	A1
Water vapour permeability, diffusion resistance factor	≤ 15
Freeze/thaw durability	20 cycles

Source: Technical recommendation SYSTEM 3E EKO+ RT2021/10/22

TECHNICAL CONSTRUCTION PARAMETERS

Characteristic compressive strength of masonry	$f_k = 1,02 \text{ N/mm}^2$
Characteristic value of the tensile strength (when the upper edge is restrained) at bending in the case of failure in the perpendicular plane	$f_{xk \perp} = 0,11 \text{ N/mm}^2$
Characteristic value of the tensile strength (when the upper edge is restrained) at bending for failure in the parallel plane	$f_{xk \parallel} = 0,31 \text{ N/mm}^2$
Characteristic shear strength of masonry	$f_{vk} = 0,07 \text{ N/mm}^2$

Source: Technical recommendation SYSTEM 3E EKO+ RT2021/10/22

LOGISTICAL DATA

Consumption of 1 m ² [el./m ²]	5,71 el./m ²
Wall area per pallet	4,2 m ² /pallet
Number of elements per pallet	to 24 el./pallet
Approximate weight of the pallet	800 - 900 kg/pallet
Weight of a single element	32 kg/el.
Weight of 1 m ²	182,7 kg/m ²

THERMAL PROPERTIES

Thermal conductivity coefficient (λ)	0,072 W/(m·K)
Thermal resistance coefficient R	4,89 (m ² K)/W
Heat transfer coefficient for unrendered walls U	0,198 W/(m ² K)
Heat transfer coefficient for rendered walls U*	0,196 W/(m ² K)

Source: Technical recommendation SYSTEM 3E EKO+ RT2021/10/22

* Wall covered with 1 cm thick gypsum plaster (λ=0,39 W/(m²-K)) on the inside and with 1 cm thick cement-lime plaster (λ=0,46 W/(m²-K)) on the outside

ACOUSTIC PROPERTIES

	$R_w (C, C_w)$, dB	$R_{A,1}$, dB	$R_{A,2}$, dB
Non-plastered wall	45 (-1;-4)	44	41
Plastered wall*	45 (-1;-4)	44	41

Source: Technical recommendation SYSTEM 3E EKO+ RT2021/10/22

* Wall covered on both sides with 1 cm thick cement-lime plaster

FIRE RESISTANCE CLASS

Loaded to 100% of the design resistance*	REI 240 + M
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Source: Technical recommendation SYSTEM 3E EKO+ RT2021/10/22

* Non-plastered wall